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OPEN ACCESS

Public involvement in the governance of population-level biomedical research: unresolved questions and future directions

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ABSTRACT

Population-level biomedical research offers new opportunities to improve population health, but also raises new challenges to traditional systems of research governance and ethical oversight. Partly in response to these challenges, various models of public involvement in research are being introduced. Yet, the ways in which public involvement should meet governance challenges are not well understood. We conducted a qualitative study with 36 experts and stakeholders using the World Café method to identify key governance challenges and explore how public involvement can meet these challenges. This brief report discusses four cross-cutting themes from the study: the need to move beyond individual consent; issues in benefit and data sharing; the challenge of delineating and understanding publics; and the goal of clarifying justifications for public involvement. The report aims to provide a starting point for making sense of the relationship between public involvement and the governance of population-level biomedical research, showing connections, potential solutions and issues arising at their intersection. We suggest that, in population-level biomedical research, there is a pressing need for a shift away from conventional governance frameworks focused on the individual and towards a focus on collectives, as well as to foreground ethical issues around social justice and develop ways to address cultural diversity, value pluralism and competing stakeholder interests. There are many unresolved questions around how this shift could be realised, but these unresolved questions should form the basis for developing justificatory accounts and frameworks for suitable collective models of public involvement in population-level biomedical research governance.

Population-level biomedical research involving large-scale biobanks, genetic data repositories and digital records offers new opportunities to improve population health, but also raises new challenges to traditional systems of research governance and ethical oversight. This is in particular because conventional models of informed consent

and ethics review are unable to account for long-term storage, sharing and linkage, and use of data for future unspecified research.¹⁻⁴ Public concerns regarding the extent to which research institutions can be trusted to handle data ethically have contributed to a 'crisis in trust' in biomedical research.^{5,6}

Partly in response to these concerns, various models of public involvement in population-level biomedical research initiatives are being introduced.^{2,7-11} However, while public involvement is generally seen as a way to foster public trust, overcome barriers to individual consent, encourage accountable and responsible research, and address other ethical issues, the ways in which public involvement can or should meet these challenges are often unarticulated and poorly defined. Although it is increasingly agreed that we have reasons to support public involvement in population-level biomedical research, it is often unclear *what* those reasons are and how they connect with the challenges that involvement is intended to address. This lack of a normative framework for public involvement in governance poses a further barrier to addressing the concerns identified. It is clear that population-level biomedical research requires a shift in ethical thinking, compared with other forms of biomedical research that have focused more on the individual, towards new approaches to governance that can better account for the collective concerns and interests involved.

To explore these issues and areas of uncertainty, we convened the Public Involvement and Governance in Population-Level Biomedical Research workshop in Oxford, UK in January 2020. The workshop brought together an international, interdisciplinary and cross-sectoral group of 36 participants with expertise and stakes in relevant issues from different perspectives, including senior and emerging academic specialists, patient and public involvement professionals and patient advocates. Invitations were sent directly to several stakeholders and information about the event was also circulated online, so that those interested, but unknown to us,



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could register and attend. As part of the workshop, we conducted a study using the World Café method, which is a group dialogue method that facilitates knowledge synthesis via group conversation and exchange of information and experiences, enabling the generation of a great deal of data in a relatively short amount of time.¹² Our World Café consisted of several rounds of small group table discussions, each focused on a different but related topic and involving a facilitator who also took notes on spreadsheets. Following small group discussions, all participants came together for a general discussion where overarching themes across the discussions were identified and evaluated.

The participants were asked to identify and discuss, first, key governance challenges in biomedical research involving biobanks, genetic repositories and digital databases, and, second, possibilities of public involvement in this mode of research and how involvement should be fostered, if at all.

The World Café generated 36 sheets of notes, which were subjected to qualitative thematic analysis, where the data were first analysed independently by four members of the research team, who then came together to merge the analyses and identify the most prominent cross-cutting themes. The findings and conclusions were then circulated to, and confirmed and approved by, all participants. This brief report discusses these four cross-cutting themes: the need for (1) moving beyond individual consent; (2) issues in benefit and data sharing; (3) delineating and understanding publics; and (4) clarifying justifications for public involvement.

MOVING BEYOND INDIVIDUAL CONSENT

A major theme in the discussions was informed consent, which has arguably been the dominant ethical doctrine in research involving humans.¹³ Participants expressed concern about the 'consent obsession' suggesting that the traditional focus on consent is inappropriate in the context of population-level research. Participants highlighted the fact that existing consent models generally focus on individual rather than community or group consent. Ethical and governance challenges in population-level research, however, go beyond individual concerns and single research initiatives, raising the possibility of community or group harm.^{14 15}

Many participants agreed that, as research gets bigger, involving larger amounts of linked population-level data, individual consent for population-level research is neither sufficient nor central to appropriate governance. A shift is needed to refocus both the theory and practice of research ethics oversight to suit the contemporary landscape of population-level research. Participants suggested that it is no longer sufficient to conceptualise research subjects as individuals taking part in research; instead, the subjects should be understood to be groups and communities, and attention should be paid to the social contexts in which the members of these groups live and the diverse interests they may express in relation to population-level biomedical research.

ISSUES IN BENEFIT AND DATA SHARING

Population-level biomedical research raises tensions, not just between individual versus collective interests, but also between different collective interests: for example, a community that has donated samples to a biobank versus the commercial entity that runs the biobank. In the context of enduring systemic national and global health inequities, participants repeatedly highlighted the importance of benefit sharing and priority setting. Some

participants suggested that because biomedical ethics has focused on protecting research participants (ie, mitigating the risks of research), the focus should now be redirected more towards what can be done for communities that engage in research. The mechanisms to enable benefit sharing were widely debated, especially in contexts where commercial interests are closely tied to research outputs: one role for public involvement could be to provide input into how benefits ought to be shared with particular communities.

Social justice and data sharing were also tied to practical questions around resources, management and curation. Population-level biomedical research initiatives often rely on data sharing including across national and regional borders, but the regulatory frameworks in different national and regional contexts are diverse and requirements for accessing different databases, depositories and biobanks are inconsistent, presenting barriers to data linkage and collaborations. Some participants noted that there can be 'gatekeeping' behaviours around databases that result, among other things, from the conflicting interests and priorities of the various stakeholders in these research initiatives. In this context, it is unclear who should decide on data access and for what purposes it can be used.

DELINEATING AND UNDERSTANDING PUBLICS

Although there has been a shift away from singular conceptualisations of 'the public' towards recognition of publics as plural,^{16 17} some participants observed that further scrutiny of the notion of 'publics' is also needed: which public(s) matter, when and why? This is connected with the question of the meaning and nature of 'public interest' and 'public benefit'. While these notions are often invoked and circulate in discussions and debates around research governance and public involvement, they are often poorly defined and rarely conceptually unpacked: as different individuals and social groups have different interests, diverse needs and perspectives on biomedical research and how it should be governed; it is unclear whose interests should count as 'public' interests, who benefits when 'public benefits' are distributed and who can legitimately answer these questions.

Participants observed that there is a need to generate better mechanisms for public involvement in population-level health research. Although such mechanisms have been developed at the level of individual research initiatives (eg, public deliberation methods), there are currently few *governance* mechanisms for making decisions collectively at a wider population level. Some participants observed that there are unresolved tensions between the centralisation of governance and local needs: high-level governance mechanisms aim to be impartial and universal, whereas local priorities and needs often require partial rather than equal benefit sharing.

DISTINGUISHING JUSTIFICATIONS FOR PUBLIC INVOLVEMENT

Despite a clear trend toward public involvement in the governance of population-level research, there remains a great deal of uncertainty and opacity about why public involvement should be undertaken.

In particular, 'legitimacy' was a noteworthy focus of discussion. Participants distinguished between descriptive and normative uses of the concept¹⁸: in practice, public involvement may be undertaken to increase public acceptance or to promote a more favourable perception of research, which would provide 'descriptive legitimacy', but does not necessarily ensure 'normative legitimacy'. The general feeling of the discussion was that

public involvement strategies should aim at normative legitimacy: involving the public for reasons other than the management of perception. Participants proposed a variety of justifying reasons, including: to understand public expectations, inform research initiatives or to ensure that research is conducted 'in the right way'. All of these were contested, and no single justification prevailed, and each raised further questions.

Participants also discussed transparency and public trust in research as an important justification for public involvement. In this context, trust was distinguished from trustworthiness^{19–21}: public trust may be gained through public involvement, but the research institution may not be trustworthy. This was importantly seen as mapping onto the distinction between the descriptive and the normative senses of legitimacy: by ensuring that they were trustworthy, research institutions were in this sense demonstrating their normative legitimacy.

Another relevant distinction, within the idea of normative legitimacy, was between intrinsic and extrinsic (or outcome-oriented) justifications for public involvement. Extrinsic justifications focus on the ways in which public involvement can facilitate 'better' research outcomes, whereas intrinsic justifications focus on the research process and the role of public involvement in making the process 'right'.²² However, while this distinction was seen as useful by many participants, their separation in practice looked difficult because the two rationales are often intertwined: public involvement in the research process may be valuable in its own right and enable better outcomes.

With this set of rationales for public involvement in play, it was apparent across the conversations that there is a need for more conceptual clarity about them and their application to specific publics, as well as how different involvement methods should map onto those justifications and how such methods should be evaluated.

CONCLUSION

Our aim in this report has been to provide a starting point for developing a more systematic ethical approach to the relationship between public involvement and governance in population-level biomedical research, showing connections, potential solutions and issues arising at their intersection. We acknowledge that there are vast literature on public involvement in health research, democratic deliberation and participation, and public engagement in decision-making, and we do not claim that our findings provide a comprehensive account of the governance challenges and justifications for public involvement. They do, however, indicate that embedding involvement in the governance of population-level biomedical research may require a novel approach. Our findings revealed how, in population-level research in particular, there is a pressing need for a shift away from conventional governance frameworks that are focused on the individual as the subject of rights, risks and benefits, and towards a focus on the collective, both in terms of foregrounding ethical issues connected with social justice, and in terms of developing ways to address cultural diversity, value pluralism and competing stakeholder interests. Existing perspectives from political theory and social science on public involvement and democratic participation could be usefully drawn on to inform further analysis on these issues. There are many unresolved questions around how this shift can or should be realised in theory and practice, including how consent should be re-conceptualised, the justifications for public involvement in research and how they map onto distinct mechanisms of involvement, how benefits should be distributed and different interests prioritised,

and who should decide how these questions are answered. These questions should be taken up by those seeking to develop accounts and frameworks of public involvement in the governance of population-level biomedical research.

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